

**Work Order ID 69613**

Thursday, May 12, 2011 3:35:29 PM



Page 1

Item ID: D3560-043

Revision ID:

Item Name: Arm Weldment

Start Date: 5/12/2011

Start Qty: 6.00

Required Date: 5/24/2011

Req'd Qty: 6.00

Accept



Setup Start



Stop



Reference:

Approvals: Process Plan:

Date: 11/05/12

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr	Memo	0.00	11/05/31	7	0	
100		BAND SAW	0.00				
Bandsaw			0.00				
Jeaspa Bandsaw		Cut blanks 15.500" long					

110

HAAS  
HAAS CNC vertical machine #1

HAAS CNC VERTICAL MACHINING #1

0.00

B.A 11/06/01

7

0

0.00

Memo  
 1- Mill as per Folio FA695 Rev: A & Dwg D3560 Rev: D  
 2-C sink 0.196" hole on manual mill as per dwg D3560  
 3-Deburr per dwg D3560

120

QC  
Quality Control

QC2- Inspect parts off machine FAI/FAIB

0.00

B.A 11/06/01

7

0

0.00

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3560-043 PAR #: \_\_\_\_\_ Fault Category: Design NCR: Yes  No  DQA: 11 Date: \_\_\_\_\_

11/06/02 Resolution: Use -0010 Disposition: Use -0010-in QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR: 69613		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11/06/02	100	Thickness of material is 0.485 instead of 0.500". R.C. mat. is similar	CP 11/06/02 PSI 642	Acceptable. PER QR-D412-630-2 Appendix A, "I" values are still above previous design values	11/06/02	OK 11/06/03	CP 11/06/02 PSI 642	S 11/06/02

NOTE: Date & initial all entries

**Work Order ID 69613**

Page 2

Thursday, May 12, 2011 3:35:30 PM

Item ID: D3560-043

Accept



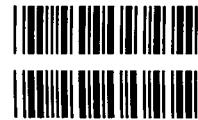
Setup Start



Revision ID:

Item Name: Arm Weldment

Stop



Start Date: 5/12/2011 Start Qty: 6.00



Cust Item ID:

Required Date: 5/24/2011 Req'd Qty: 6.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center ID

130



QC

Quality Control

Operation  
Description

QC8- Inspect parts - second check

Set Up/  
Run Hours

0.00

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

140



Large Fab

Large Fab

0.00

0.00

Large Fab

Memo

1-Weld assembly as per dwg D3560

STEP:

- 1- clean material (buff bracket and bottom of arm with blue pad )
- 2- set up bracket and arm on jig
- 3- preheat bracket and arm with torch
- 4- clean before welding with brush
- 5- set up machine to 135 amps
- 6- weld across bottom and top ends
- 7- reheat with torch ( 65 deg C )
- 8- on one side weld from bottom to top half way
- 9- same for other side (half way)
- 10- from half way point weld the rest of the first side (ease off pedal near end)
- 11- same for remaining side (ease off pedal near end)

0.00

4/11/06/06

7 6

Pto →

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3560-043 PAR #: \_\_\_\_\_ Fault Category: Large Prob / Process NCR: Yes  No  DQA: 11 Date: 11.06.21  
 11.06.21 Resolution: Rework Disposition: Rework QA: N/C Closed: OK Date: 11.06.21

WORK ORDER NON-CONFORMANCE (NCR)								
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11.06.08	140	Found at welding inspection A crack in the D3592+1 Plate. L.C. Process	<u>PF</u> 11.06.08 <u>QST 004</u> <u>QST 041</u>	cut out crack and fill in with weld as per QST 004 A/R <u>M114703</u> 24xe	<u>PF</u> 11.06.08	<u>OK</u> 11/06/08	<u>Q</u> 11.06.08 <u>QST 042</u>	<u>S</u> 11/06/08
				REF W10 44472				

NOTE: Date & initial all entries

**Work Order ID 69613**

Page 3

Thursday, May 12, 2011 3:35:30 PM

Item ID: D3560-043

Accept



Setup

Start



Revision ID:

Item Name: Arm Weldment

Stop



Start Date: 5/12/2011 Start Qty: 6.00



Cust Item ID:

Required Date: 5/24/2011 Req'd Qty: 6.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

150



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

S ual de 100

~~7 0 86/06/08~~  
 7 0 86/06/08  
 0-3

160



QC

Quality Control

QC9- Inspect visual per QSI004- Fusion Welds

0.00

Memo

0.00

7 0 86/06/08

170



HandFinish

Hand Finishing

Chemical Conversion Coat per QSI005 4.1

0.00

Memo

0.00

7 X 0 86/06/08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**Work Order ID 69613**

Page 4

Thursday, May 12, 2011 3:35:30 PM

Item ID: D3560-043

Accept



Setup

Start



Revision ID:

Item Name: Arm Weldment

Stop



Start Date: 5/12/2011 Start Qty: 6.00



Cust Item ID:

Required Date: 5/24/2011 Req'd Qty: 6.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

180



QC3- Inspect Part Finish

0.00

7 φ BL11-6-8

QC

Memo

0.00

Quality Control

190



Small Fab

0.00

ES 14/06/09 ⑦

Small Fab

Memo

0.00

Small Fab

1-Press bushing in D3560 arm per dwg D3562

200



QC5- Inspect part completeness to step on W/O

0.00

0.00 8 May 09

QC

Memo

⑦<sup>043</sup>

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**Work Order ID 69613**

Thursday, May 12, 2011 3:35:30 PM



Page 5

Item ID: D3560-043

Accept



Setup Start



Revision ID:

Item Name: Arm Weldment

Stop



Start Date: 5/12/2011 Start Qty: 6.00



Cust Item ID:

Required Date: 5/24/2011 Req'd Qty: 6.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

210

Identify as per dwg & Stock Location: WAT

0.00

11-06-09

7 8

Packaging

Memo

0.00

Packaging

\*\*\* STOCK IN STEP CELL\*\*\*

220



QC21- Final Inspection - Work Order Release

0.00

11-06-09

QC

Quality Control

Memo

0.00

MF  
11-06-09

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

## Picklist Print

Thursday, May 12, 2011 3:35:37 PM

Page 1

Work Order ID: 69613



Parent Item: D3560-043



**Parent Item Name:** Arm Weldment

**Start Date:** 5/12/2011

**Required Date:** 5/24/2011

**Comments:** IPP Rev:A New Issue 07.05.24 EC  
IPP Rev B ECN 987 07.10.09 EC  
IPP Rev:C ECN1048 07-12-18 DD verified by: EC

Start Oty: 6.00

**Start Qty: 6.00**      **Required Qty: 6.00**

**Start Qty: 6.00**      **Required Qty: 6.00**

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

Bushing      Location      Loc Qty      Loc Code

GA 32896 11         
46738 2         
          9

M6061T6B0.500X05.00  
0 Purchased No 140 f 16.0000 1.295 8.178947

6061-T6 Bar .500 x 5.00

<u>Location</u>	<u>Loc City</u>	<u>Loc Code</u>
MAT004	16	
112154 M-117798	16	9.065

On 2/11/05.

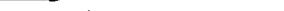
D3592-1      Manufactured No      190      Each      75.0000      1      6           

Plate Location Loc Qty Loc Code

WA002 75  
47015 27  
48517 48

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	49613
Description: Arm	Part Number:	D3560-3
Inspection Dwg: D3560	Rev: D	Page 1 of 1

## FIRST ARTICLE INSPECTION CHECKLIST

## X First Article      Prototype

Measured by:	J.A.	Audited by:	Greg	Prototype Approval:	N/A
Date:	11/06/01	Date:	11/06/03	Date:	N/A

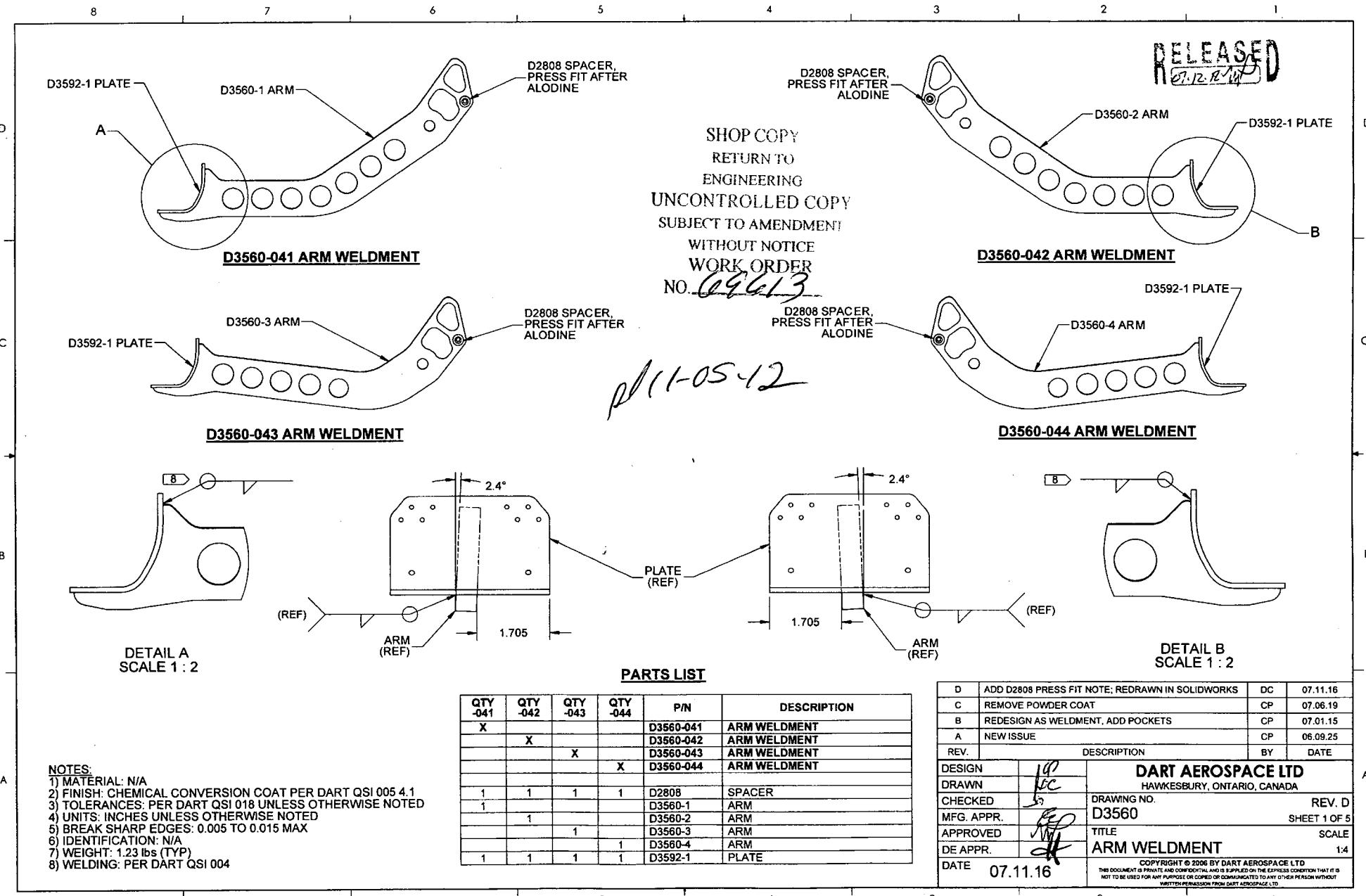
Rev	Date	Change	Revised by	Approved
A	07.01.17	New Issue	KJ/JLM	
B	07.06.13	Dimensions updated per Dwg Rev B	KJ/JLM	
C	08.09.09	2.000 dimension removed	KJ/DD	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



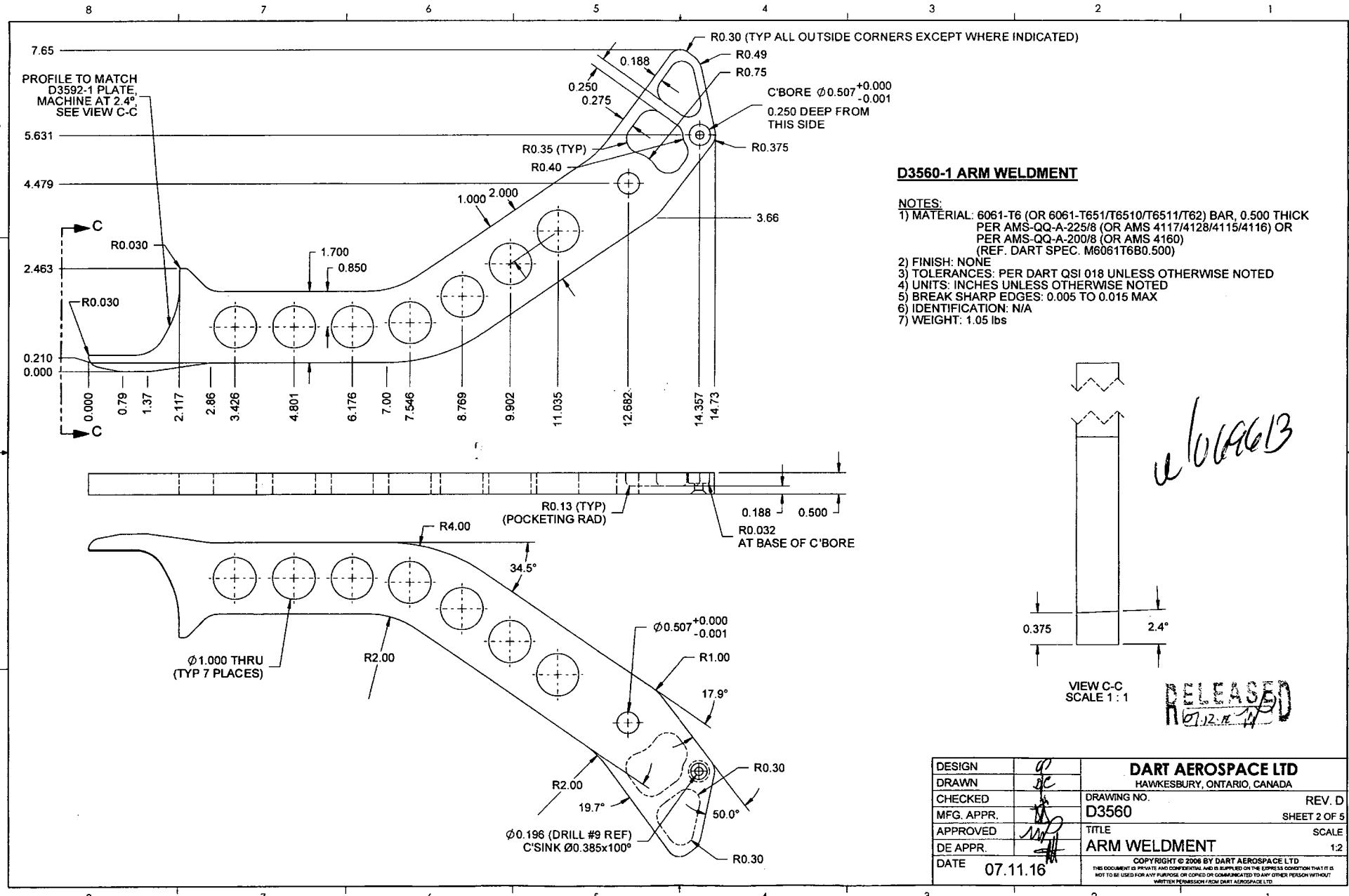
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN	97	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	SC		
CHECKED	14	DRAWING NO.	REV. D
MFG. APPR.	14	D3560	SHEET 2 OF 5
APPROVED	14	TITLE	SCALE
DE APPR.	14	ARM WELDMENT	
DATE	07.11.16	COPYRIGHT © 2008 BY DART AEROSPACE LTD THE DOCUMENT IS PRIVATE PROPERTY OF DART AEROSPACE LTD. IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

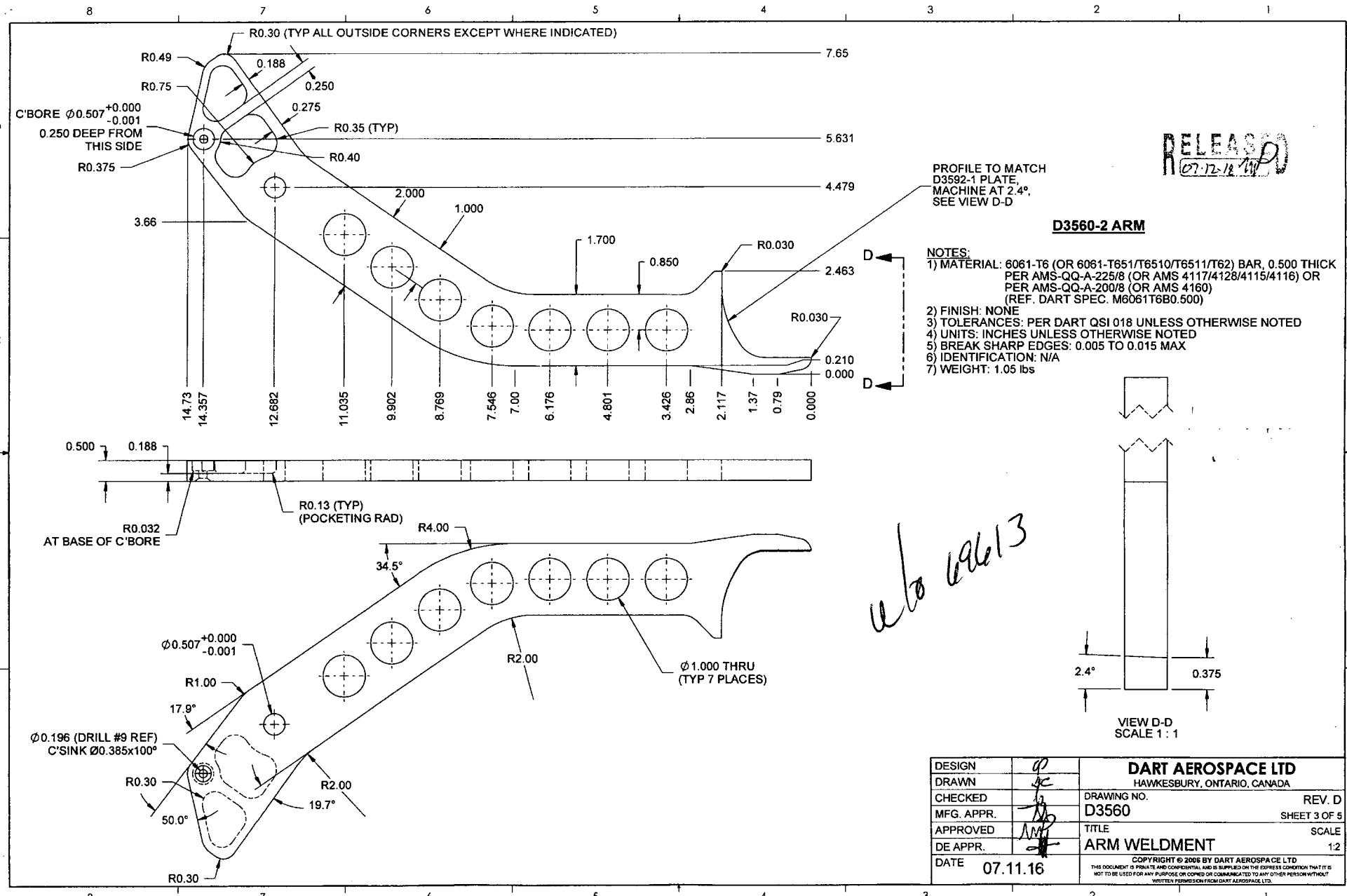
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN	90	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	9C		
CHECKED	12	DRAWING NO.	REV. D
MFG. APPR.	10	D3560	SHEET 3 OF 5
APPROVED	AM	TITLE	SCALE
DE APPR.		ARM WELDMENT	1:2
DATE	07.11.16	COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE PROPERTY AND IS TO BE KEPT IN A SECURE CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR DISCLOSED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

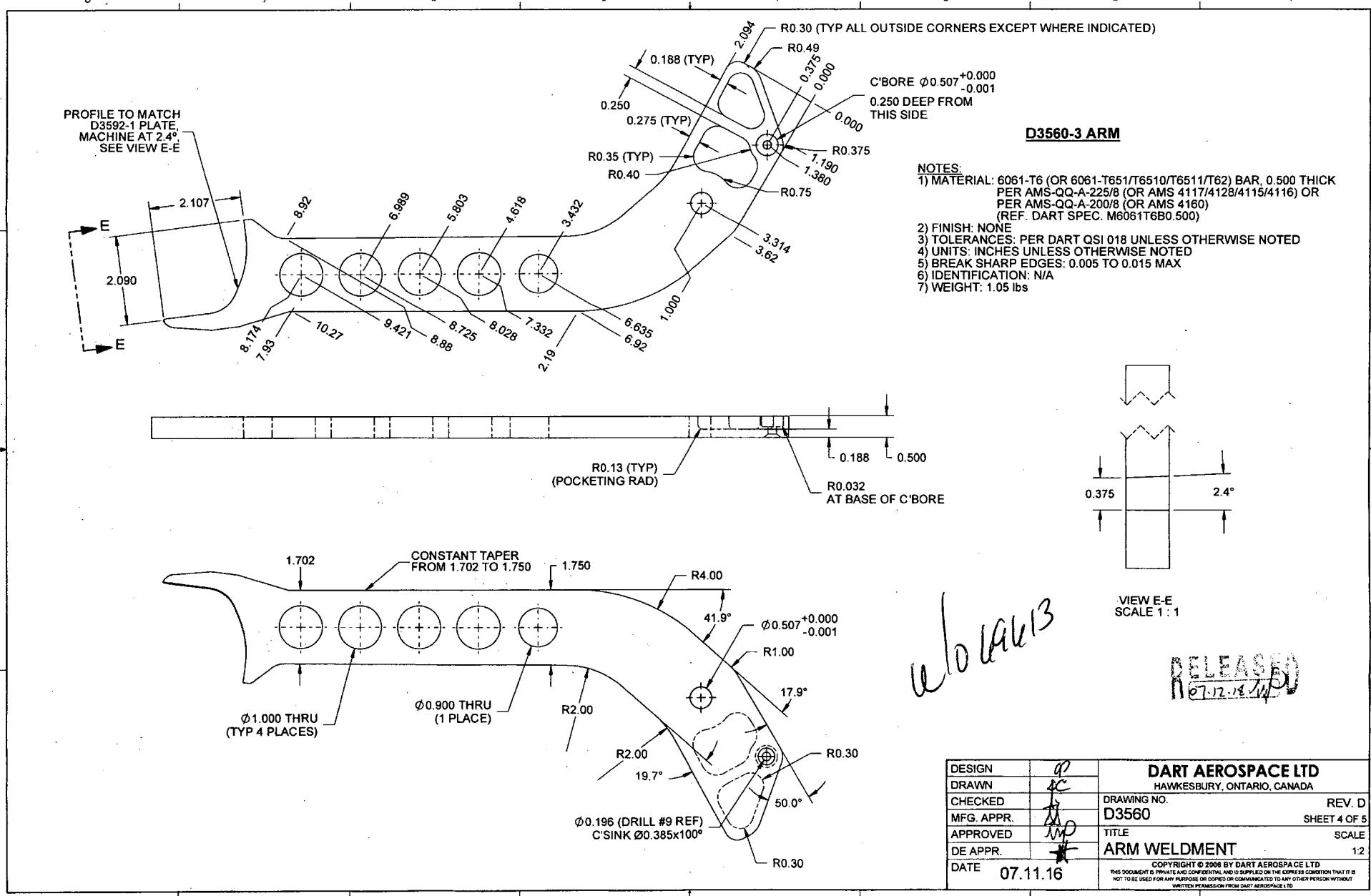
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

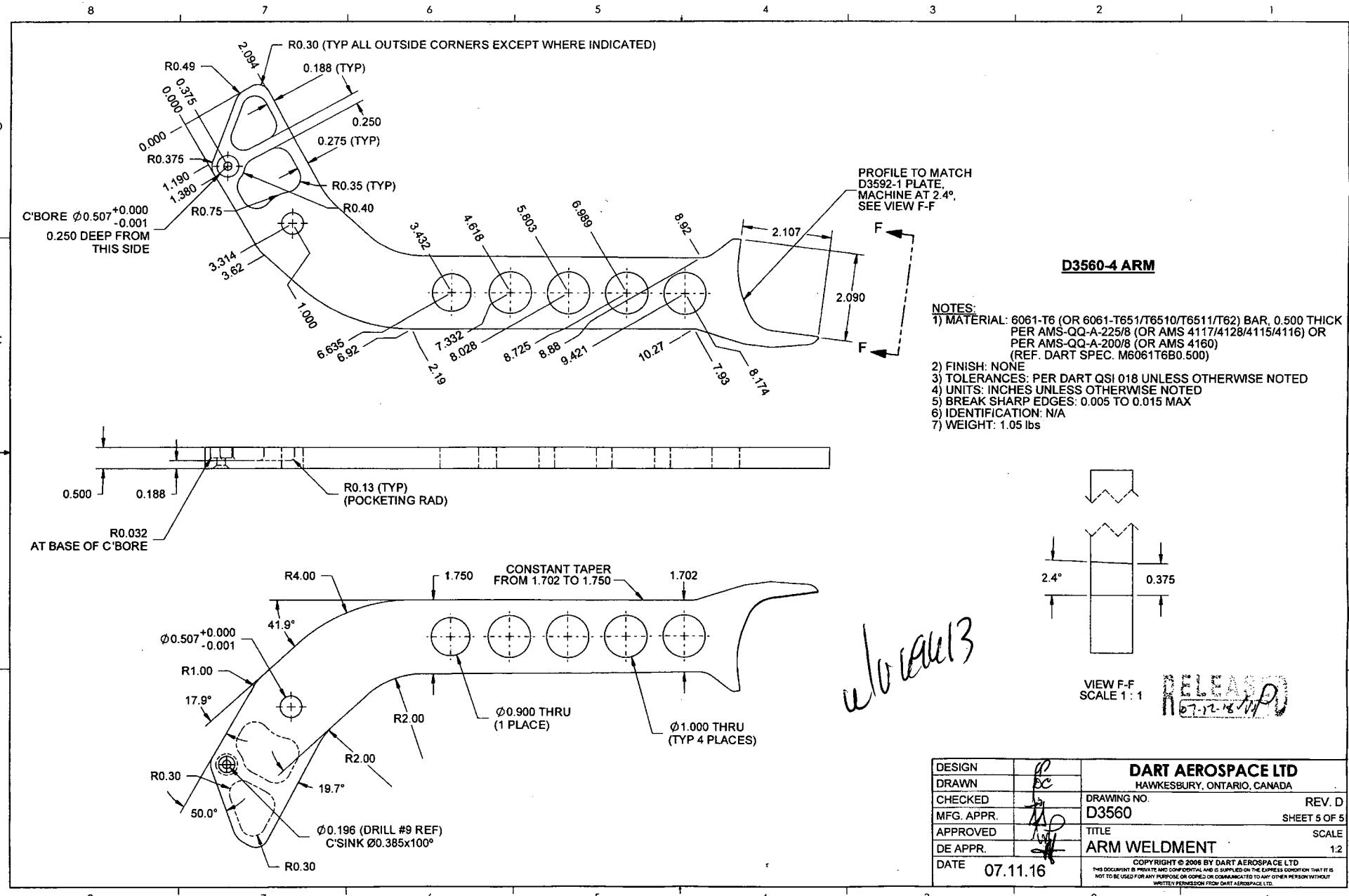


W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN	<i>RP</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA		
DRAWN	<i>DC</i>			
CHECKED	<i>JP</i>			
MFG. APPR.	<i>MP</i>	DRAWING NO.	REV. D	
APPROVED	<i>WJ</i>	<b>D3560</b>	SHEET 5 OF 5	
DE APPR.	<i> </i>	TITLE	SCALE	
DATE	07.11.16	<b>ARM WELDMENT</b>		

COPYRIGHT © 2006 BY DART AEROSPACE LTD  
THIS DOCUMENT IS PROPRIETARY INFORMATION OF DART AEROSPACE LTD. IT IS FOR COMPANY USE ONLY AND IS NOT TO BE USED FOR ANY PURPOSE OR ON BEHALF OF COMPANY OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries